

**MISSOURI COALITION FOR THE  
ENVIRONMENT FOUNDATION,**

**Plaintiff,**

**V.**

**ANDREW R. WHEELER, et al.,**

## Defendants.

**Case No. 2:19-cv-04215-NKL**

## ORDER

Before the Court is Plaintiff Missouri Coalition for the Environment Foundation’s Motion for Summary Judgment, Doc. 56, Defendant Environmental Protections Agency’s Cross-Motion for Summary Judgment, Doc. 61, and Intervenor-Defendant State of Missouri’s Cross-Motion for Summary Judgment, Doc. 66. The Coalition seeks judicial review of EPA’s decision approving the State of Missouri’s proposed water quality standards under the Administrative Procedure Act (“APA”). The Coalition moves for summary judgment in their favor and a declaratory judgment that EPA abused its discretion and acted contrary to law when it approved the State’s water quality standards for nutrient pollutants in lakes which were submitted to EPA in 2018. It requests an injunction setting aside that approval and an order awarding costs and fees. EPA and the State, meanwhile, move for Summary Judgment in their favor. For the reasons stated below, the Coalition’s Motion is denied and EPA’s and the State of Missouri’s Motions are granted. The Coalition’s Complaint is dismissed.

The Coalition is a non-profit environmental organization challenging EPA’s decision to approve water quality standards proposed by the State of Missouri for nutrient pollutants—namely,

nitrogen, phosphorous, and chlorophyll—in Missouri lakes. In excess, these pollutants can cause dangerous algae outbreaks that threaten the health of both Missourians who depend on Missouri’s lakes for drinking water and recreation as well as the wildlife who live in and around them. Missouri previously proposed water quality standards for nutrient pollutants in 2009. These standards set hard limits on the amount of nitrogen, phosphorous, and chlorophyll that could be present in Missouri lakes. In 2011, EPA rejected these standards because (1) it could not determine whether the standards were based on a sound scientific rationale; and (2) the State did not indicate what specific use the standards were intended to protect—for instance, whether the standards were meant to protect the drinking water supply in the lakes or their ability to sustain a diverse array of wildlife. AR 3006-07. EPA asked the State to (1) supply data that would allow EPA to determine if its standards were based on sound science; and (2) specifically identify what lake uses the standards were intended to protect. AR 3008. It recommended, but did not require, that the State’s new approach maintain a hard limit on the amount of nitrogen and phosphorous allowed in Missouri lakes. AR 3007.

In 2018, the State returned with standards that included adequate technical support and a specific use designation, i.e., to protect the sportfish in Missouri lakes. The State proposed a “combined criteria framework” that combines the use of numeric criteria for chlorophyll—where the state establishes a hard limit of how much chlorophyll can be in a lake—and narrative criteria—where the state makes qualitative observations of a lake’s condition—to ensure its lakes remains usable as sport fisheries. The standards did not include hard limits for nitrogen or phosphorous, which are the causal factors of nutrient pollution. Most of the State’s proposed narrative criteria duplicated already-existing narrative criteria in Missouri’s quality standards that apply to all

waterbodies at all times. EPA approved the State's 2018 standards after finding they would protect the sport fishing as well as the drinking water use. AR 4041.

Between the 2011 rejection and the 2018 approval, EPA and the State often engaged in dialogue to ensure that any proposed standards would comport with the CWA. In 2015, the State circulated new proposed standards that set numeric criteria for chlorophyll but not for nitrogen or phosphorous. In 2016, EPA in response recommended the State adopt numeric criteria for every nutrient pollutant—nitrogen, phosphorous, and chlorophyll. The State did not follow this advice—its 2018 proposal only set numeric criteria for chlorophyll. Nitrogen and phosphorous were measured only as “screening values”—meaning their measurement in excess of a certain concentration would trigger additional screening of the lake but would not cause an immediate finding of impairment. Outside of this specific rulemaking process, EPA “has long recommended that states adopt numeric criteria” for nitrogen and phosphorous.” AR 4017.

Viewed as a whole, EPA's actions beginning with its 2011 Disapproval Decision and culminating in its 2018 Approval Decision raise significant questions. In approving the State's 2018 proposal, the EPA abandoned its well-reasoned 2016 recommendation that the State adopt numeric criteria for nitrogen and phosphorous. It did so after finding the State lacked an adequate scientific basis to establish numeric criteria for those nutrients, even though the agency had developed a preference for establishing numeric criteria for all pollutants in lakes, presumptively based on scientific data. EPA recognized Missouri's decision to adapt standards for the protection of sport fishing rather than drinking water but decided it did not matter legally because the State's use of narrative factors provided sufficient protection to the drinking water supply use. EPA's decision leaves Missourians in virtually the same position they were in in 2009—protected by general narrative criteria with the new addition of a hard chlorophyll cap to remediate the most

egregious algae outbreaks—in other words, waiting to let the nutrient pollution cause damage to the lakes requiring remediation rather than preventing the nutrient pollution in the first place. In short, EPA contemplated numeric criteria for nitrogen and phosphorous in 2011, recommend numeric criteria for those pollutants in 2016, and then in 2018 concluded the State lacked a scientific basis to establish numeric criteria. The sequence of events might lead reasonable Missourians to wonder what scientific analysis EPA performed in the interim, at what cost, and to what benefit.

Nonetheless, the Court’s review of these decision under the APA is very limited. It must only consider whether there is any rational basis for the APA’s determination that the water quality standards proposed by the State in 2018 would protect the designated uses of Missouri’s lakes. On this record, EPA has supplied a rational basis for its determination that the proposed standards will do so, even if it cannot supply a rational basis for how its decision comports with its 2011 Disapproval Decision or 2016 recommendation.

Before proceeding, a note on terminology. The briefing and record in this case are replete with jargon—response impairment thresholds, biological assessment endpoints, nutrient screening thresholds, nutrient screening endpoints, etc. Although these terms are used in different ways by different parties at different times, they usually describe the same basic concepts. For the sake of simplicity, the Court will adopt a single term and strive to use it consistently in this Order. As such, the Court will use the term “numeric criteria” to describe standards that establish a hard limit on the amount of pollutant in a lake that, if met or exceeded, will cause the lake to be considered impaired automatically. It will use the term “narrative criteria” to describe standards that rest on qualitative descriptions of a lake—for instance, that it smells, is discolored, or is turbid. It will use the term “screening value” to describe standards that establish an amount of pollutant in a lake

that, if exceeded, will trigger additional screening to determine if the lake is impaired. It will use the term “screening factors” to describe the five factors the State proposes to assess if additional screening is triggered. The term “impaired” simply means the lake cannot be used in accordance with its designated use—for instance, that water in a lake with a drinking water use cannot be made potable, or that a lake with an aquatic life use cannot sustain the intended wildlife population.

#### **a. Background**

##### **i. Statutory Framework**

The purpose of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The CWA requires states to develop water quality standards for all navigable bodies of water within their jurisdiction. See 33 U.S.C. § 1313(a). EPA must evaluate any new or revised state standards to ensure compliance with the CWA. 33 U.S.C. §§ 1313(c)(2)(A), (c)(3). If EPA disapproves the standards, it must notify the state within 90 days and specify changes for the state to make. 33 U.S.C. § 1313(c)(3). The state then has an additional 90 days to revise its standards. *Id.* If it fails to do so, EPA “shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved.” 33 U.S.C. § 1313(c)(4).

The CWA requires states to establish water quality criteria that specify the amount of pollutant that can be in a body of water. 40 C.F.R. § 131.3(b). Criteria can be narrative in form, meaning they can describe what a body of water must look and smell like, or they can be numeric, meaning they can provide a quantitative and precisely measurable limit on how much pollutant can be present. 40 C.F.R. § 131. Since the 1990s, EPA has favored the use of numeric criteria, and has provided support for states seeking to implement numeric criteria. In this case, the pollutants at issue are nutrient pollutants: nitrogen, phosphorous, and chlorophyll. Nitrogen and phosphorous

are regarded as “causal parameters” because they are the primary ingredients in algae, and in high enough quantities will cause algae growth in a body of water. Chlorophyll is regarded as a “response parameter,” because its concentration in a body of water indicates the presence of algae, itself a response to the presence of nitrogen and phosphorous. Algae in certain quantities can lead to documented health problems in people, pets, and wildlife. AR 3154.

## **ii. 2009 Proposal**

In November 2009, the State submitted to EPA proposed water quality standards for nutrient pollutants in Missouri lakes. Its proposal contained site-specific standards for 25 lakes and non-site-specific standards that would apply to all other lakes in its purview. The standards set out numeric criteria for phosphorous, nitrogen, and chlorophyll. AR 1210. In August 2011, EPA approved the site-specific standards but rejected the State’s non-site-specific standards. AR 3005-3007. EPA determined that the State’s submission did not specify which designated use it was trying to protect and did not contain the data and documentation that it needed to determine whether its criteria were based on a sound scientific rationale. AR 3006. It determined that the State “[failed] to demonstrate that the values or approaches to numeric nutrient criteria will protect the designated aquatic life or recreational uses.” AR 3006-07. It asked the State to revise its criteria to clearly indicate which designated uses<sup>1</sup> the criteria were intended to protect for each lake and to include supporting data that would allow EPA to determine if the State’s proposal had a sound scientific basis. AR 4017. Although it did not specifically instruct the State to adopt numeric

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<sup>1</sup> There are three main types of designated uses for lakes in Missouri: (1) the DWS (“drinking water supply”) use, assigned to lakes where the standards must protect drinking water supply; (2) the WBC (“whole body contact”) use, assigned to lakes where the standards must protect recreational swimming opportunities; or (3) the AQL (“aquatic life”) use, assigned to lakes where the standards must protect recreational fishing opportunities. A lake can, and often does, have multiple designated uses.

criteria for phosphorous or nitrogen, it did ask the State to take into account that “Statistical relationships between” chlorophyll, nitrogen and phosphorous “can also be estimated and used to translate chlorophyll criteria to corresponding TN [nitrogen] and TP [phosphorous] criteria”—implying that although the State had not done so in this instance, it was possible to establish valid numeric criteria for phosphorous and nitrogen based on a sound scientific rationale. AR 3007. Nonetheless, EPA also stated it would “support the state if they chose to modify their criteria beyond the original framework established within their Rationale[.]” AR 3008.

Sent back to the drawing board, the State began work on new nutrient pollutant standards, albeit with a distinct lack of haste. Five years after the rejection of its 2011 standards, the State had still not formally submitted new standards. In February 2016, the Coalition sued EPA, claiming it had failed to timely promulgate numeric nutrient criteria for Missouri lakes in light of the State’s delay in submitting new criteria under 33 U.S.C. § 1313. See *Missouri Coalition for the Environment Foundation v. McCarthy*, 2:16-cv-04069-NKL. That litigation concluded in November 2016 when the Court entered a consent decree requiring EPA to promulgate water quality standards by December 15, 2018 unless it approved the State’s criteria before that date. Doc. 56-3, at 116.

In the fall of 2015, the State circulated draft standards intended to protect the drinking water and aquatic life uses, but not the recreational swimming use. AR 3069-70. The standards set numeric criteria for chlorophyll, but not for phosphorous or nitrogen. *Id.* Measures of phosphorous and nitrogen were considered screening values instead of numeric criteria. The distinction between numeric criteria and screening values is critical in this case. When the concentration of a pollutant in a lake exceeds the numeric criteria, it is immediately regarded as impaired, a designation that requires the State to limit further discharge of that pollutant into the lake. AR 3185. In this way,

numeric criteria function as a “hard limit” on a pollutant. In contrast, when the concentration of a pollutant in a lake exceeds the screening value, the State is only required to further investigate whether a lake is impaired. The State must investigate and weigh additional indicia of pollution before designating the lake impaired. In the context of nutrient pollutants, the excess concentration of phosphorous or nitrogen would require the State to look for heightened fish mortality (a sign of either hypoxia or a sudden shift in the condition of the lake) or visible algal bloom (a sign of excess nutrients), among other factors. The State’s plan treated chlorophyll as both a screening value (at a lower amount) and a numeric criteria (at a higher amount). When chlorophyll was measured in excess of the screening value, it would trigger investigation of whether a screening factor was present. When chlorophyll was measured in excess of the numeric criteria, the lake would be designated impaired without further analysis.

In May 2016, EPA informed the State in preliminary written comments that it was skeptical of its 2015 proposal because it would “focus on the identification of waters already requiring restoration and would do little to protect designated uses.” AR 4778. It also noted that it offered “no protection beyond that provided under the general narrative criteria” because things like “fish kill” and the presence of algal bloom were duplicative of already-existing general narrative criteria. *Id.* It acknowledged the State was hesitant to propose numeric criteria for phosphorous and nitrogen due to scientific uncertainty regarding the relationship between nutrient concentration and adverse biological effects, but also noted that those same reasons “[had] not prevented many other states from developing and adopting scientifically supportable and protective numeric criteria for total phosphorous and total nitrogen.” AR 4779. In its conclusion, it expressed concern that the 2015 proposal “may not be scientifically defensible and protective of the designates uses . . . as required by federal law.” *Id.*



In July 2017, following the entry of the consent decree, the State shared a new proposal that was substantively similar to its 2015 proposal—again containing only numeric criteria for chlorophyll and intending to protect the drinking water and aquatic life uses. Doc. 56-1, at 142. In August 2017, EPA released its own proposed criteria, with an eye toward satisfying its obligation under the consent decree to promulgate new standards by December 15, 2018. EPA’s standards as contained in its August 2017 proposal were stricter than the standards in the State’s July 2017 proposal, and again included numeric criteria for chlorophyll, nitrogen, and phosphorous. EPA’s standards were designed to protect the aquatic life use, although it concluded they would also protect the drinking water and recreational swimming uses. AR 4035.

Dialogue between EPA and the State was ongoing during this period. EPA represents that it was normal to give feedback to states on proposed standards before they were officially submitted to ensure they “comply with all federal statutory and regulatory requirements.” EPA Br. 22. In October 2017, the State circulated new standards that purportedly incorporated EPA feedback on its July 2017 proposal. AR 4047 (“In response to other concerns the EPA raised in its May 2016 letter, Missouri has incorporated TN and TP causal parameter thresholds in its combined criterion approach . . .”). “Causal parameter thresholds” is EPA’s term for screening values—meaning the standards circulated in 2017 still did not set numeric criteria for nitrogen or phosphorous. The State’s October 2017 proposal was substantively identical to the standards eventually approved by EPA.

On December 27, 2017, EPA put forward two alternative proposals: A proposal that matched its own August 2017 proposal (Alternative 1) and a proposal that matched the State’s latest October 2017 proposal (Alternative 2). 82 Fed.Reg. 61,213. EPA found that despite the fact that Alternative 1 set numeric criteria for all nutrient pollutants and Alternative 2 only set numeric

criteria for chlorophyll, the protections they each provided “closely approximate each other” after accounting for Alternative 2’s combined criteria framework. AR 4035-36. Alternative 1 was accompanied by EPA’s own technical documentation. Alternative 2 relied on the technical documentation supplied in the State’s October 2017 proposal. Not surprisingly, the State signaled that it preferred Alternative 2, which is to say it preferred its own approach. AR 2368. The State opined that Alternative 1 “does not realistically link the proposed criteria to the designated use, is unnecessarily restrictive, and will be costly and burdensome for Missouri citizens to implement.” AR 2369.

### **iii. Challenged 2018 Proposal**

On April 13, 2018, the State submitted a finalized proposal to EPA for review that matched its October 2017 proposal and EPA’s Alternative 2. AR 3145-48. The criteria and screening values in its finalized proposal were as follows:

	<b>Plains</b>	<b>Ozark Border</b>	<b>Ozark Highlands</b>
<b>Chlorophyll Nutrient Criteria</b>	30 <sup>2</sup>	22	15
<b>TP Screening Value</b>	49	40	16
<b>TN Screening Value</b>	843	733	401
<b>Chlorophyll Screening Value</b>	18	13	6

AR 3390. If one or more screening values are exceeded, the State will look to the following five screening factors before deciding if the lake is impaired: (1) Occurrence of eutrophication-related

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<sup>2</sup> These values represent the number of micrograms per liter of lake water (“µg/L”), equivalent to parts per billion.

mortality or morbidity for fish and other aquatic organisms; (2) Epilimnetic excursions from dissolved oxygen or pH criteria (essentially the presence of dissolved oxygen on the surface of the lake, indicating the presence of phytoplankton near its surface); (3) Cyanobacteria counts in excess of 100,000 cells per milliliter; (4) Observed shifts in aquatic diversity attributed to eutrophication; and (5) Excessive levels of mineral turbidity that consistently limit algal productivity from May through September. Factors 1, 2, 4 and 5 are qualitative—they are expressed in narrative terms.<sup>3</sup> Factor 3 is quantitative—it is expressed in numeric terms. If at any point the chlorophyll nutrient criteria is exceeded, the lake will be considered impaired. Alternatively, if one or more screening values are exceeded, the lake will be considered impaired if the State also finds one or more of the five screening factors present. EPA described the framework in its decision document:

MDNR's combined criterion approach includes three components: Response Impairment Thresholds [numeric criteria] for chlorophyll-a which represent a "ceiling" above which a lake is considered impaired (not meeting its aquatic life designated use); Nutrient Screening Thresholds [screening values] for chlorophyll a, TP [phosphorous], and TN [nitrogen] which represent a "floor" below which a lake is considered to be attaining its aquatic life designated use; and a set of five Response Assessment Endpoints [screening factors] to determine attainment status in between.

AR 4033 (brackets added).

Under 40 C.F.R. § 131.11(a)(1), when a waterbody has multiple uses, the standards must protect the most sensitive use. In this case, the above standards were designed to protect the health of aquatic life in the lakes, which the State decided to treat as the most sensitive use. AR 3157. The State's criteria were specifically designed to protect the health of sport fish in Missouri lakes.

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<sup>3</sup> The State's Implementation Plan purports to transform these narrative factors into numeric factors by specifying how they will be measured in quantifiable terms. However, because the Implementation Plan is not part of the State's submission to EPA and was not promulgated under Missouri's rulemaking process, the Court can only consider these factors to be narrative.

Under 40 C.F.R. § 131.11(b)(1), a state must establish criteria with numerical values based on EPA guidance or a scientifically defensible method. If there is no EPA guidance and no scientifically defensible method for establishing numeric criteria, the state may establish “narrative criteria or criteria based upon biomonitoring methods.” 40 C.F.R. § 131.11(b)(2). Narrative criteria can also be used to supplement numeric criteria. *Id.* EPA has not issued guidance for establishing numeric criteria for phosphorous or nitrogen. As such, the State had the responsibility to develop its own scientifically defensible method for establishing numeric criteria or, failing that, to develop either narrative criteria or criteria based upon biomonitoring methods. The State adopted the latter approach: it adopted numeric criteria for chlorophyll and supplemented those criteria with screening values for chlorophyll, nitrogen, and phosphorous (all expressed numerically), narrative criteria in the form of the existing general narrative criteria, and the five screening factors (four expressed narratively, one expressed numerically).

EPA promptly began review of the proposed standards. In June 2018, it asked the State to provide “more of the science” the State used to derive appropriate narrative criteria to protect sport fish populations. AR 2619. When responding, the State referred to details contained in its Implementation Plan, which it issued on July 27, 2018. AR 4709. The Implementation Plan also laid out the specific procedures that the State intended to use to implement its proposed standards and explained how the narrative screening factors would be quantified when implemented. *Id.* Additional technical documentation was supplied to EPA by the Metropolitan St. Louis Sewer District. AR 2619, 2624.

On December 14, 2018, EPA approved the State’s proposed Standards after finding they were scientifically sound, complied with the statutory and regulatory requirements of the Clean Water Act, and addressed the issues raised in its 2011 rejection. AR 4016, 4041. EPA supported

the State's combined criteria approach and noted it was in keeping with a "Guiding Principles" document it issued in 2013 that was intended to help states design such an approach. AR 4033. It noted the combined criterion approach was not novel, and that it had "worked with several states as they developed [an] . . . approach that allows a state to further consider whether a waterbody is meeting designated uses when elevated TN and TP levels are detected." AR 4017.

EPA found that the State's proposed standards would protect the use they were intended to protect—the aquatic life use. It further found that the State's decision to not set numeric criteria for nitrogen or phosphorous to protect other uses, most notably the drinking water use, was not a violation of 40 C.F.R. § 131.11(a). AR 4023-24. EPA approved the State's decision to not develop stand-alone numeric criteria for any nutrient to protect drinking water, stating that it "supports Missouri's position that it needs to collect more data and conduct further analysis before establishing numeric expressions for nutrients in their WQS." AR 4025. EPA followed a similar line of reasoning when considering the State's decision to not use numeric criteria for protecting the recreational swimming use. AR 4025-26. It accepted the State's representation that it currently lacked a scientifically defensible method for establishing numeric criteria for the drinking water use but would establish numeric criteria to protect that use in a future rulemaking, after it had more time to gather data and conduct research. *Id.* EPA noted that to the extent that the drinking water supply use—not the aquatic life use—was the actual most sensitive use, the State's existing general narrative criteria would protect the drinking water supply use until protective numeric criteria could be established. AR 4026. *See, e.g.,* 10 C.S.R. 20-7.031(5)(E); 20-7.031(4).<sup>4</sup>

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<sup>4</sup> 10 C.S.R. § 20-7.031(4) establishes the following general narrative criteria:

"The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination

As to the aquatic life use, the State justified its decision to use the population health of sport fish in its lakes to develop its numeric criteria by stating that its “findings show the health of sport fish populations can be interpreted as an indicator of overall ecosystem health and the presence of a ‘wide variety’ of aquatic biota, as defined in the existing regulation.”<sup>5</sup> AR 3160. Essentially, because sport fish are apex predators, protections that allow sport fish to flourish necessarily would be enough to sustain a healthy biota below them on the food chain. Without explicitly endorsing the “sport fish” methodology, EPA noted that the State had “explicitly determined that sport fish can be interpreted as an indicator of a sufficiently ‘wide variety of biota’” and found that the State’s criteria would protect a wide variety of biota as required under the CWA and Missouri law. AR 4041. EPA found that the “Scientific literature abounds with studies indicating that increased levels of nutrients . . . measured by chlorophyll . . . are associated with increased biomass of fish[.]” AR 4029. It found that although there was a point where increased nutrient levels may lead to a decrease in overall lake productivity, that point was well above the State’s proposed numeric criteria for chlorophyll. *Id.*

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with other substances, shall prevent the waters of the state from meeting the following conditions:

- (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly, or harmful bottom deposits or prevent full maintenance of beneficial uses;
- (B) Waters shall be free from oil, scum, and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor, or prevent full maintenance of beneficial uses;
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or aquatic life. However, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones . . .”

<sup>5</sup> The State noted that its numeric criteria are set not to “[maximize] sport fish harvest” but to “support sport fisheries.” AR 3178. The State does not elaborate on what this distinction means in practical terms.

## **b. Legal Standard**

Under the Administrative Procedures Act, an agency decision may only be set aside if the Court finds that its actions, findings, and conclusions were arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law. 5 U.S.C. § 706(2)(A). Summary judgment is the mechanism for deciding whether an agency action was consistent with this standard of review. *Epps v. NRCS*, 425 F.Supp.3d 1142, 1149 (D. Neb. 2019). Agency action is arbitrary and capricious where the agency has “relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, failed to follow its own regulations, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs’ Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); *Nat’l Envtl Dev. Ass’n v. EPA*, 752 F.3d 999, 1009 (D.C. Cir. 2014).

Agency actions are presumed valid, and the challenger has the heavy burden of showing the action was not the product of reasoned decisionmaking. *Van Hollen, Jr. v. Fed. Election Comm’n*, 811 F.3d 486, 495 (D.C. Cir. 2016). The Court may not substitute its decisionmaking for the agency. *Id.* The deference afforded to the agency is even greater when its decision was of a technical nature. *Friends of the Norbeck v. U.S. Forest Serv.*, 661 F.3d 969, 976 (8th Cir. 2011). In such cases, the agency action must be upheld if it is supportable on any rational basis. *In re Operation of the Missouri River System Litig.*, 421 F.3d 618, 628 (8th Cir. 2005) (internal citations omitted); *National Parks Conservation Ass’n v. McCarthy*, 816 F.3d 989, 994 (8th Cir. 2016).

Before approving a state’s water quality standards, EPA must determine (1) whether the state has adopted uses consistent with the CWA; (2) whether the state adopted criteria to protect

the use; (3) whether the state has followed its own procedures for revising or adopting standards; (4) whether the state standards regarding the drinking water use are based upon appropriate technical data; and (5) whether the state standards contain the elements set forth in 40 C.F.R. § 131.6. 40 C.F.R. § 131.5. The criteria must protect the waterbody's designated use, be based on scientific rationale, and, when a waterbody has multiple uses, protect the most sensitive use. 40 C.F.R. § 131.11(a).

### **c. Discussion**

The Coalition argues that EPA's decision to approve the challenged standards must be set aside for three principle reasons: (1) its determination that the standards protected the most sensitive use was arbitrary and capricious; (2) its determination that the State's combined criteria framework protected the designated use was arbitrary and capricious; and (3) its decision to approve nutrient criteria that were tailored to protect sport fish, rather than a wide variety of biota, was arbitrary and capricious and not in accordance with the law. Because it is the Coalition's burden to show the EPA's decision is invalid, *Guaranty Sav. & Loan Ass'n v. Fed. Home Loan Bank Bd.*, 794 F.2d 1339, 1342 (8th Cir. 1986), the Court will focus on whether it has met its burden. If the Court finds the Coalition has not met its burden, it must find EPA's action valid and grant defendants' motions for summary judgment on that basis.

Before addressing the Coalition's three substantive arguments, the Court will dispense with two connected arguments that appear throughout the Coalition's briefing: (1) That the approved standards do not align with EPA's preferred numeric criteria approach and are in important ways less stringent than prior potential standards circulated by EPA; and (2) that EPA's decision to withdraw its more stringent standards and approve the proposed standards was tainted by politics. The Coalition's briefing calls attention to the transfer of executive power from Democrats to



Republicans in Missouri and the United States in January 2017. It implies that these changes in administration are a relevant context for EPA's approval decision. Pl. Br. at 12. The briefing also alleges that EPA should not have approved the State's combined criterion framework because it diverged from EPA's own recommendations by not establishing numeric criteria for phosphorous and nitrogen. By pointing to a pattern of conduct whereby the post-2017 EPA became more amenable to the State's efforts to craft lax water quality standards, the Coalition attempts to undermine EPA and the State by implying that their post-2017 actions were motivated not by science but by the prevailing political winds.

Congress has cabined EPA's role to determining whether the State's proposal is protective of designated uses based on sound scientific rationale. 33 U.S.C. §§ 1313(a)(3)(C), (c)(2); 40 C.F.R. § 131.15(a), *et seq.* The Coalition cites no authority expanding EPA's role beyond this "very limited" remit. *City of Albuquerque v. Browner*, 97 F.3d 415, 425 (10th Cir. 1996); see *Barnum Timber Co. v. EPA*, 835 F. Supp. 2d 773, 780 (N.D. Cal. 2011) (EPA's "role is one of mere oversight.").

Whether MDNR or EPA's actions were influenced by politics is not the issue before the Court. The issue before the Court is whether any rational basis supported EPA's decision to approve the challenged standards and whether its decision was arbitrary, capricious, or not in accordance with the law. See *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 514-15 (2009) (agency action is not subject to heightened scrutiny merely because the action represents a policy change). Likewise, the State's decision to veer from EPA's advice by not imposing numeric criteria for every nutrient pollutant and by using a novel "apex predator" approach to derive nutrient criteria is not a basis to subject EPA's decisionmaking to a heightened standard of review. Again, EPA's technical decision must be upheld so long as its approval of the State's standards

comported with the law and was supportable on any rational basis, even if the State did not follow every piece of advice it received or succumbed to interest group or ideological pressure. *See Hodel v. Virginia Surface Mining and Reclamation Ass'n, Inc.*, 452 U.S. 264, 289 (1981) (states may enact their own regulatory programs structured to meet their own needs within statutory limits); *NRDC v. EPA*, 16 F.3d 1395, 1399, 1401 (4th Cir. 1993) (EPA's "duty is not to determine whether the states used EPA's recommended criterion but instead to review "whether the states' decision is scientifically defensible and protective of designated uses. . .").

### **1. Most Sensitive Use**

The most sensitive use is commonly defined as the use that would require the most stringent numeric limitations. *Florida Wildlife Federation, Inc. v. Jackson*, 853 F.Supp.2d 1138, 1165 (N.D. Fla. 2012). The State designated the aquatic life use as the most sensitive and focused its efforts accordingly. AR 3157. The State designated the aquatic life use as the most sensitive after making a scientific conclusion that the chlorophyll numeric criteria needed to protect that use was lower than the criteria for the drinking water use in the Ozark Border and Ozark Highlands ecoregions, and only 5 parts per microliter higher than the criteria for the drinking water use in the Plains ecoregion (30 µg/L vs. 25 µg/L). AR 3157.

EPA stated that given the lack of data and information relating to non-aquatic life uses it was difficult to "definitively identify the most sensitive use" but that it had determined that to the extent the aquatic life use was the most sensitive, the chlorophyll numeric criteria would provide sufficient protection. AR 4025-26. EPA further stated that "to the extent it becomes evident that water supply or recreational uses are the most sensitive use, MDNR can rely on their existing general criteria" to protect those uses. AR 4025-26. Essentially, EPA concluded that the numeric criteria propounded by the State adequately protected the aquatic life use and that the existing

narrative criteria adequately protected the drinking water and recreational uses. As such, no matter which use is the “most sensitive” in any particular ecoregion, the State’s standards were adequately protective. The State is allowed to establish multiple criteria for the same pollutant, including a combination of narrative and numeric criteria, “as long as the criteria support the most sensitive use of that particular body of water.” *NRDC v. EPA*, 16 F.3d 1395, 1405 (4th Cir. 1993). As such, the State is allowed to use both its new proposed criteria and its existing general narrative criteria to control nutrient pollutants in its lakes, as long as the criteria in combination protect the most sensitive use.

#### **i. Most Sensitive Use**

The Coalition argues that the State’s numeric criteria in the Plains ecoregion are deficient by the State’s own measure because they do not protect the most sensitive use. To review, the State initially found that a 25 µg/L criteria for chlorophyll would protect the drinking water use in the Plains ecoregion and that a 30 µg/L numeric criteria for chlorophyll would protect the aquatic life use in that same region. AR 3157. As such, the drinking water use was the most sensitive use in the Plains ecoregion as that term is used by EPA and the State. Nonetheless, because the aquatic life use was the more sensitive use in Missouri’s two other ecoregions and because the 25 µg/L criteria for the drinking water use was “similar” to the 30 µg/L criteria for the aquatic life use in the Plains ecoregion, “it was decided that the focus of the current effort would be [aquatic life use] criteria.” AR 3157.

EPA left ambiguous which use it considered more sensitive. It found the State’s decision to focus on the aquatic life use was reasonable because it was “difficult to identify the most sensitive use” given a lack of information and data relating to the aquatic life and recreational uses. AR 4026. The State concluded that the most sensitive use is the one that requires the most stringent

numeric criteria. Twenty-five µg/L is a lower figure than 30 µg/L, and consequently the drinking water use was the most sensitive use in the Plains ecoregion as that term is defined by the State. The Coalition characterizes the State as using a “close enough” approach, rather than a rational basis approach, when it decided to focus on the aquatic life after acknowledging its own finding that the drinking water use required a more stringent numeric chlorophyll criteria in the Plains ecoregion. Pl. Br. at 20.

However, the Coalition acknowledges that EPA did not rely solely on the 30 µg/l numeric criteria for chlorophyll to protect Missouri lakes. Rather, EPA took a holistic view of the proposed standards, which established a 30 µg/L criteria for chlorophyll but also included the rest of the combined criteria framework as well as the existing general narrative criteria. Furthermore, EPA did not rely on the State’s contention that the aquatic life use was the most sensitive use for purpose of its analysis. Rather, EPA made two distinct determinations: First, that the numeric nutrient criteria would protect the aquatic life use; and second, that “to the extent that water supply or recreational uses are the most sensitive, MDNR can rely on their existing general criteria.” AR 4025-26.

The Coalition argues EPA’s decision in this matter—that the proposed standards protected the aquatic life use and that, to the extent that the drinking water use in the Plains ecoregion was a more sensitive use, it was protected by the existing general narrative criteria—was an impermissible repudiation of the directives contained in EPA’s 2011 rejection letter and the feedback it gave to the State on draft water standards it circulated in May 2016.

In 2011, EPA rejected the State’s proposed standards because the State did not indicate which designated use the nutrient criteria were meant to protect and did not supply enough data for EPA to evaluate its scientific conclusions. AR 3006-07. It directed the state to revise its criteria

“to clearly indicate which designated uses the criteria is intended to protect” and to supply data allowing EPA to evaluate its scientific conclusions. AR 3007. It also offered to “support the state if they chose to modify their criteria beyond the original framework established within their rationale . . . “ AR 3008.

In 2016, EPA responded to a draft proposal with a recommendation that the State promulgate numeric criteria for phosphorous and nitrogen despite the State’s uncertainty regarding the relationship between those chemicals and adverse biological effects. AR 4778. EPA expressed concern that the State had not demonstrated that its proposed numeric criteria for chlorophyll, standing alone, would protect either the aquatic life or drinking water uses. AR 4779. Most notably, it observed that the four screening factors it proposed (fish kill, visible algal bloom, turbidity, and fluctuations in dissolved oxygen concentrations) matched existing general narrative criteria and thus did not provide any additional protection to Missouri lakes. AR 4778 (“This approach appears to offer no protection beyond that provided under the state’s long-standing general (narrative) water quality criteria.”).

The Coalition asserts that EPA’s decision to approve the State’s proposed standards conflicted with its 2011 rejection and 2016 recommendation in two important ways: (1) They did not set numeric criteria for nitrogen and phosphorous; and (2) they did not set any numeric criteria to protect the drinking water use. The Coalition claims that although EPA is allowed to change its mind as to what the State’s standard must contain, it must provide a reason for doing so, and that it did not offer any reason here. *See FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515-16 (2009) (requiring an agency to supply a reasoned explanation when it departs from a prior policy).

EPA responds by noting that states are categorically not required to adopt numeric criteria under 40 C.F.R. § 131.11. Instead, a state is allowed to use narrative criteria “where numerical

criteria cannot be established” or to supplement numeric criteria. 40 C.F.R. § 131.3(b). EPA considered and approved Missouri’s proposed standards, which set out a framework for assessing nutrient pollutants that combined numeric and narrative criteria after independently reviewing the technical documentation and concluding that the framework would protect the aquatic life use. EPA also evaluated the State’s existing general narrative criteria and concluded that those criteria would protect the drinking water and recreational uses. AR 4026 (“MDNR’s existing narratives sufficiently address the types of harm excess nutrients may present to lakes designated for drinking water supply and recreational uses . . . “). *See Friends of the Norbeck*, 661 F.3d at 976 (“The deference afforded to the [EPA] is even greater when its decision was of a technical nature.”).

The State’s 2018 proposed standards addressed the two issues identified by EPA in its 2011 rejection letter in that it definitively identified the use the standards were meant to protect and supplied data allowing EPA to review its scientific conclusions. Nothing in EPA’s decision controverts its 2011 rejection letter, which by its own terms allowed the State to “modify their criteria beyond the original framework[.]” AR 3008.

The relationship between the State’s proposed standards and EPA’s 2016 recommendation is another matter. The EPA decided to abandon its 2016 recommendation that the State establish numeric criteria for nitrogen and phosphorous and embrace the State’s use of screening factors that, in its own words, “[appear] to offer no protection beyond that provided under the state’s long-standing general (narrative) water quality criteria.”. AR 4778. EPA’s decision to approve water quality standards that in large part duplicate the protections already afforded by the general narrative criteria represents a significant change from its 2016 position that numeric criteria should be adopted for nitrogen and phosphorous.

EPA's explanation for this change in approach is not persuasive. It relies on the State's rationale that it could not adopt numeric criteria for nitrogen or phosphorous because existing data relating to microcystin concentration was inadequate for that purpose. AR 4025-26 ("the Agency supports Missouri's position that it needs to collect more data and conduct further analysis before establishing numeric expressions for nutrients in their WQSs."). Microcystin are a type of toxin that appear alongside algae in freshwater. By measuring the ratio between nitrogen and phosphorous concentrations and microcystin concentrations, MDNR planned to determine how much nitrogen and phosphorous could be present in a lake before risking an unsafe concentration of microcystin. In this way, numeric criteria for phosphorous and nitrogen could be established using microcystin data.

Or so EPA presumably thought in 2016, when it recommended to the State that it establish numeric criteria for these nutrients. And in fact, by 2017, EPA was circulating draft standards that relied on microcystin data to establish these numeric criteria. AR 1244 ("EPA estimated statistical relationships between TN, TP, and microcystin . . . then derived TN and TP criteria values that would ensure that microcystin concentrations within Missouri lakes would not exceed threshold concentrations."). Yet by 2018, EPA had come to agree with the State "that it needs to collect more data and conduct further analysis before establishing" numeric criteria for nitrogen and phosphorous in their water quality standards because "the existing information relating to microcystin" was inadequate for purposes of deriving numeric criteria. AR 4025.

For reasons explained below, EPA's decision to abandon the use of microcystin data to establish numeric criteria for phosphorous and nitrogen was arguably defensible. Harder to defend is the contention that microcystin data was the only method that could be used to establish numeric criteria for nitrogen and phosphorous. To wit, EPA acknowledges that by 2018 "many other states"

had adopted “scientifically supportable and protective numeric criteria for total phosphorous and total nitrogen” based on a “least disturbed reference” model. AR 4779. Furthermore, in its 2011 rejection letter, EPA identified other potential avenues for establishing numeric criteria for nitrogen and phosphorous, AR 3007, and presumably would not have recommended establishing numeric criteria for these chemicals in 2016 if it considered the task impossible. While EPA has not yet issued definitive guidance to states seeking to establish numeric criteria for nitrogen and phosphorous, it did circulate a proposal establishing such criteria in 2017 and has approved other state’s proposals establishing the same. AR 1210, AR 1242 (“The resulting criteria also are comparable in magnitude to those . . . adopted in neighboring Kansas, Nebraska and Oklahoma, and to TMDL targets adopted previously in Missouri.”).

EPA represents that while many other states had by 2016 cracked the code for establishing numeric criteria for phosphorous and nitrogen, the staff at MDNR could not be expected to do the same. EPA does not explain why it has such a low opinion of MDNR’s scientific capabilities.

Left without numeric criteria for nitrogen and phosphorous, the State’s framework relies on a two-step screening process with a hard chlorophyll numeric criteria operating as a last ditch means of establishing impairment. Under the two-step screening process, lakes will be monitored for nitrogen, phosphorous, and chlorophyll. The measuring of any of these pollutants in excess of their screening value will cause MDNR to assess whether one or more of the five screening factors are present. If at least one screening factors is present, the lake will be considered impaired. Yet four of these five factors (fish kill, turbidity, excess dissolved oxygen, and shifts in aquatic diversity) are already part of the State’s general narrative criteria, meaning they are already independent bases to find a lake impaired. As such, the proposed standards at their core represent a very limited change to the *status quo*—essentially circumscribed to the establishment of a hard



numeric criteria for chlorophyll and the addition of a single quantitative screening factor (cyanobacteria counts in excess of 100,000 cells per millimeter) that in combination with an excess screening value would lead to a finding of impairment of the aquatic life use, the most sensitive use in the ecoregion that provides the great majority of Missouri's drinking water supply.<sup>6</sup> AR 3067.

Nonetheless, the only issue on review under the APA is whether EPA's Approval Decision was supportable on any rational basis. Its decision cannot be set aside on the basis of prior non-binding recommendations, draft proposals, or its 2011 rejection which by its own terms allowed the State "to modify their criteria beyond the original framework." AR 3008. EPA has made a "scientific" determination that the proposed standards will adequately protect the aquatic life use and that the existing general narrative standards adequately protect the drinking water use to the extent that that use can be considered more sensitive.

Although the Coalition concedes that the State is categorically not required to establish numeric criteria under 40 C.F.R. § 131.11, it argues that EPA's change in policy runs afoul of *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). In *Fox Television*, the Supreme Court held that an agency must supply a good reason for a policy change—it may not depart from an old policy *sub silentio* or simply disregard old rules on the books. *Id.* In that case, however, the policy in question was embedded in a binding FCC Order. In this case, there is no equivalent agency decision or regulation that is being disregarded or amended. To the extent that EPA's 2011 rejection letter binds the agency by preventing it from approving future proposals that disregard its directions without further explanation, the State's 2018 proposal explicitly addressed EPA's

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<sup>6</sup> Of the 118 lakes and reservoirs that are designated for drinking water use, 107 are located in the Plains ecoregion, 3 are in the Ozark Border ecoregion, and 8 are in the Ozark Highland ecoregion.

directions by identifying a designated use and supplying adequate supporting documentation. The heart of the Coalition’s argument is that EPA has improperly discarded its preference for numeric criteria as expressed in its 2016 recommendation letter. However, it does not cite authority establishing that EPA must provide an explanation when it departs from a non-binding recommendation. In the language of *Fox Television*, EPA’s approval decision did not “undo” or “revise” a previous agency action—it represented an entirely new determination based on a new framework, new analysis, and new raw data. *Id.*<sup>7</sup>

Even if EPA’s approval decision did represent a change in policy from its 2011 rejection letter, the decision document laid out good reasons for why the State’s proposed standards comported with the Clean Water Act. EPA discussed with specificity the context of and reasoning behind the 2011 disapproval and why, in its estimation, the new proposal had overcome or made irrelevant the deficits that doomed its 2009 proposal. AR 4017-18. The Coalition may have good reasons to disagree with EPA’s decision, but colorable reasons for the decision were provided, and EPA did not technically disregard its 2011 rejection.<sup>8</sup> *Fox Television*, 556 U.S., at 515 (“[The

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<sup>7</sup> The Coalition, citing to *Fox Television*, claims that “An agency faces a higher burden of justification when it reaches diametrically opposite conclusions based on the same facts.” Pl. Br. at 16. *Contra* the Coalition, *Fox Television* overruled circuit court precedent “requiring a more substantial explanation for agency action that changes prior policy” while also holding that agencies must provide a “reasoned explanation” for why it had rejected the prior policy and the justifications behind it. It did not require a agency to offer “more substantial” justifications than would be ordinarily required. See *NAACP v. FCC*, 682 F.2d 993, 988 (D.C. Cir. 1982); *Fox Television Stations, Inc. v. FCC*, 489 F.3d 444, 456-57 (2d. Cir. 2007). Furthermore, its citations to *Organized Village of Kake v. USDA*, 795 F.3d 956 (9th Cir. 2015), *Western Watershed Project v. Bernhardt*, 428 F.Supp.3d 327 (D. Or. 2019), and *IEN v. U.S. Dep’t of State*, 377 F.Supp.3d 561, 583-84 (D. Mont. 2018) are inapposite. In those cases, the agency did not address the reasons they had decided to abandon an old policy. In this case, EPA addressed its decision to not require numeric criteria for phosphorous and nitrogen when it explained that the State lacked a sound scientific basis to establish those criteria because of inadequate microcystin data.

<sup>8</sup> From the decision document: “The approved provisions are based on sound scientific rationale and are protective of the designated uses for which they are developed to protect and therefore address EPA’s 2011 disapproval.” AR 4041.

agency] need not demonstrate to a court's satisfaction that the reasons for the new policy are better than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better[.]” The Court will not set aside EPA’s action as arbitrary or capricious on this basis.

## **ii. Microcystin Data**

Before the 2018 proposal was submitted, EPA advised the State to consider measuring the amount of algal toxins in a lake to develop numeric criteria for the drinking water use. AR 4024. In response, the State considered adopting a chlorophyll numeric criteria of 25 µg/L to protect the drinking water use. AR 3157-58. It based this potential threshold on microcystin data. AR 3157 (“The initial recommendations for DWS criteria, based on analyses of the limited microcystin data in Missouri’s lakes, along with review of disinfection byproducts information from Missouri drinking water treatment plants, led to a suggested chlorophyll response impairment threshold of 25µg/L for DWS.”). Ultimately, the State decided to not establish numeric criteria for the drinking water use because its scientific foundation was based on what it considered “limited microcystin data.” AR 3157. It explained that more data needed to be gathered on microcystin and other algal toxins and that further research would “allow the state to better address drinking water protection during a future rulemaking.” AR 3158. EPA supported the State’s decision to not establish numeric criteria for the drinking water use based on microcystin data because it was a “matter of evolving science” that required further analysis and because EPA itself had not provided guidance on the use of microcystin data to establish numeric criteria. AR 4025.

The Coalition argues EPA’s acceptance of the State’s decision in this matter was arbitrary and capricious because (1) the State had even less microcystin data in 2011 than in 2018; and (2)

EPA circulated unfinalized proposed standards in 2017 that established numeric criteria for nitrogen and phosphorous to protect the drinking water use.

As to the first reason, the fact that the State had more microcystin data in 2018 than it had in 2011 does not mean it had enough microcystin data to establish numeric criteria in its 2018 rulemaking. The fact that the State proposed numeric criteria for nitrogen and phosphorous in 2009 indicates its belief that it had enough evidence to establish those criteria at that time. However, as we know, EPA rejected the State's numeric criteria for, among other reasons, not providing an adequate scientific basis for its criteria. The State took a new tack in the subsequent decade, focused on microcystin data, but by its own account was unable to develop criteria based on that data in this rulemaking. EPA supported the State's position that it had more work to do before it could establish numeric criteria based on microcystin data, especially given EPA's determination that it was "a matter of evolving science" and its corresponding failure to issue definitive guidance concerning the use of microcystin data. AR 4025. *See Friends of the Norbeck*, 661 F.3d at 976 ("The deference afforded to the [EPA] is even greater when its decision was of a technical nature.").

As to the second reason, the fact that EPA circulated unfinalized numeric criteria for nitrogen and phosphorous to protect the drinking water use in 2017 does not bind EPA to require the State to establish numeric criteria protecting that use in its own standards. Under 40 C.F.R. § 131.11, the State is allowed to adopt narrative criteria whenever "numerical criteria cannot be established or to supplement numerical criteria." 40 C.F.R. § 131.11(b)(2). In this case, the State developed a colorable basis to establish that a chlorophyll numeric criteria of 30 µg/L would protect the aquatic life use but did not develop specific numeric criteria to protect the drinking water use after determining its limited microcystin data was insufficient to establish numeric

criteria. AR 4034. The State's failure stems from its reliance on limited microcystin data which it determined was insufficient to establish numeric criteria in this rulemaking. Although EPA circulated its own draft numeric criteria protecting the drinking water use in 2017, it eventually agreed with the State that more research was needed before it could establish numeric criteria based on microcystin data. AR 4025. While EPA did propose numeric criteria for nitrogen and phosphorous using microcystin data, there is evidence of a 50% confidence interval around those values.<sup>9</sup> AR 1245. The Court must defer to EPA's scientific determination in this matter. *See Friends of the Norbeck*, 661 F.3d at 976. Because EPA had a rational basis to believe that the State's proposed standards comported with the Clear Water Act, the Court cannot set them aside.

## **2. Combined Criteria Framework**

The Coalition next argues that the State's Combined Criteria Framework was insufficient to protect the designated uses and that EPA's determination otherwise was arbitrary and capricious because (1) the State, by its own account, relied on a 2013 EPA guidance document that conflicts with its own proposed standards and (2) the framework impermissibly relies on the State's Implementation Plan, which cannot be used to alter its proposed standards into compliance.

### **i. 2013 EPA Guidance Principles Document**

The Coalition claims the State is bound by a document titled "Guiding Principles on an Optional Approach for Developing and Implementing a Numeric Nutrient Criterion that Integrates Causal and Response Parameters" published by EPA in September 2013.<sup>10</sup> AR 3072. The

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<sup>9</sup> For example, the numeric criteria for phosphorous in "cold bottom" conditions is set at 30 µg/L to protect the drinking water use, but the confidence intervals reflect only a 50% certainty that the actual appropriate value falls between 22 and 40 µg/L. AR 1244-45. Given this range of uncertainty, it is not irrational for EPA to accept that further research on the use of microcystin data was needed.

<sup>10</sup> The document can be found at <https://www.epa.gov/sites/production/files/2013-09/documents/guiding-principles.pdf> (last accessed May 27, 2021).

document's purpose was to "clarify to states about an optional approach for developing a numeric nutrient criterion that integrates causal (nitrogen and phosphorous) and response ([chlorophyll]) parameters into one water quality standard (WQS)." *Id.* at 1. The document sets out how a state could establish standards that "rely on response parameters to indicate that a designated use is protected, even though a nitrogen and/or phosphorous level is/are above an adopted threshold." *Id.*

This approach resembles the State's own proposed framework. The State's framework combines hard numeric criteria that operate as a ceiling above which a lake will be considered impaired, lower screening values that set a floor below which a lake will not be considered impaired, and a space between floor and ceiling where the state will weigh whether a lake is impaired using the five screening factors, which themselves assess biological factors.

In the language of the 2013 Guiding Principles document, nitrogen and phosphorous are the causal parameters, setting a floor, and chlorophyll is the response parameter, setting a ceiling. Yet while the Guiding Principles set out an approach where causal parameters could be satisfied without the lake being considered impaired, it also stated that "Numeric values for all parameters must be set at levels" that will protect a lake before it requires restoration" and that "All causal and response parameters should be expressed numerically." *Id.* at 2-3.

The Coalition argues the State's framework impermissibly contradicts the Guiding Principles because under its framework, a lake could already need restoration by the time it is designated impaired. This is so because under the State's framework, every one of the three measured nutrient pollutants could exceed their screening values before the lake is evaluated for the presence of a screening factor. Only if one or more of those factors are present will the lake be designated impaired, at which point restoration might already be required. The Coalition argues that under the Guiding Principles, the State must promulgate regulations that protect a lake's

intended use before it requires restoration. The State admits that its approach is meant to allow a focus on restoration, as opposed to preservation. AR 3080 (“This approach will allow the department to focus its efforts and resources on those reservoirs most likely in need of restoration.”). The Coalition claims EPA’s decision to approve the State’s framework despite its departure from the Guiding Principles document is persuasive evidence it acted arbitrarily and capriciously.

This argument fails because the 2013 Guiding Principles document explicitly disclaims its ability to bind EPA or the State: “These guiding principles do not impose legally binding requirements on the EPA, states, or the regulated community, nor do they confer legal rights or impose legal obligations upon any member of the public . . . These guiding principles do not constitute a regulation, nor do they change or substitute for any CWA provision or EPA regulation.” *Id.* at 1. The Coalition acknowledges the Guiding Principles are nonbinding. Pl. Br. at 26 (“MCE acknowledges that the EPA 2013 guidance . . . is not binding”). Nonetheless, it contends that “EPA’s approval must offer an explanation for the state’s divergence from the guidance and for its own decision to disregard it when evaluating the criteria.” Pl. Br. at 26-27. EPA cites to three cases in support of the proposition that EPA must abide by its non-binding guidance. See *Town of Barnstable, Mass. v. F.A.A.*, 659 F.3d 28, 34-36 (D.C. Cir. 2011); *Nat’l Mitigation Banking Ass’n v. U.S. Army Corps of Engineers*, 2007 WL 495245, at \*28 (N.D. Ill. Feb. 14, 2007); *Utahns for Better Transp. v. U.S. Dep’t of Transp.*, 305 F.3d 1152, 1165 (10th Cir. 2002), *as modified on reh’g*, 319 F.3d 1207 (10th Cir. 2003). On their faces, neither *Barnstable* nor *Utahns* support this proposition—the Tenth Circuit in *Utahns* discussed the binding nature of a duly-promulgated regulations, not an informal guidance document. *Id.* In *Barnstable*, the guidance at issue was the FAA’s own internal handbook. *Barnstable*, 659 F.3d, at 35-36. An employee

handbook or manual definitively establishes an agency's internal procedures; departure from those procedures without explanation is a well-establish basis to invalidate an agency action. *See D & F Afonso Reality Trust v. Garvey*, 216 F.3d 1191, 1197 (D.C. Cir. 2000). The Guiding Principles is not an internal handbook and is not similarly binding.

In *National Mitigation*, the district court does state that “although internal guidance is not binding regulation,” in some circumstances “an agency’s noncompliance with its own guidance can be a basis to find its actions arbitrary and capricious.” 2007 WL 495245, at \*28 (internal citations omitted). It did not, however, explain in what circumstances an agency’s divergence from its guidance can form the basis for a finding of arbitrariness, nor did it find that the agency in question (the Army Corps of Engineers) violated its own guidance in this instance. *Id.* at 29 (“the Corps’s interpretation of its guidance . . . is reasonable[.]”). In this context, the holding of the district court is unpersuasive. This case does not present a circumstance where EPA must explain its decision to depart from the terms of a non-binding guidance document meant only to explain one way a state States might design a framework for regulating nutrient pollutants. By its own terms, the document “[does] not impose legally binding requirements on EPA, the states, or the regulated community . . . . These guiding principles do not constitute a regulation, nor do they change or substitute for any CWA provision or EPA regulation.” *See Iowa League of Cities v. EPA*, 711 F.3d 844, 867 (8th Cir. 2013) (holding that when considering whether an agency has issued a binding or non-binding statement of policy, it must give great weight to how the agency characterizes its own statement.) (citing *Molycorp, Inc v. EPA*, 187 F.3d 543, 545 (D.C. Cir. 1999)). If EPA meant for the Guiding Principles document to bind states, it could have said as much. Instead, it said the opposite.



Because the Coalition has not offered support for its claim that EPA was required to abide by the 2013 Guiding Principles when evaluating the State’s proposal, its argument that its action should be set aside on this basis fails.

## **ii. Reliance on Implementation Plan**

The Coalition argues that EPA improperly relied on the State’s Implementation Plan in its decisionmaking. It points to EPA’s approval of the five proposed screening factors despite the fact that four of them were narrative in nature. EPA argued each of them were “quantitative in some respect if the further articulation in the State’s Implementation Plan is considered, except for the observed shifts in aquatic diversity[.]” AR 4037.

Because the Implementation Plan was not part of the State’s proposal and was not subject to the regulatory process, its provisions cannot be relied on by EPA in its decisionmaking process. To do so would be to allow the state to impermissibly rewrite its own regulations outside of the rulemaking process. *Kentucky Waterways Alliance v. Johnson*, 540 F.3d 466, 494 (6th Cir. 2008). The Implementation Plan represents only an informal commitment from the State, not a binding regulation. However, the Implementation Plan is primarily mentioned in relation to the five screening factors, and nowhere does EPA condition its approval on the fact that these factors are numeric or may become numeric when implemented.<sup>11</sup> EPA viewed the subjective nature of these factors—the fact that their measurement may change over time—as a point in their favor, since “This degree of subjectivity is likely by design and may prove beneficial as MDNR develops

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<sup>11</sup> EPA also referenced the Implementation Plan when addressing public comments criticizing the standards as too reactive. AR 4046 (“MDNR described in its Implementation document some initial approaches for permitting on a watershed basis, noting that ‘all permitting will be consistent with federal and state requirements.’”). Again, however, EPA does not rely on the Implementation Plan to address these criticisms—it is merely pointing out that other currently existing regulations (like those allowing watershed-specific permitting) could, when combined with the proposed standards, protect the designated use before it becomes impaired.

approaches to evaluate potential shifts and their early indication signals.” AR 4046. These limited references to the Implementation Plan do not establish that EPA impermissibly relied on it when making its approval decision, and thus do not render its approval arbitrary or capricious.

More fundamentally, the Coalition does not establish why the screening factors must be numeric. As noted in the prior section, the State in this case is allowed to supplement its numeric criteria with narrative criteria. In this light, the narrative screening factors may be considered supplemental to the numeric chlorophyll criteria, an approach expressly permitted under 40 C.F.R. § 131.11.

### **3. Sport Fish Approach**

The State defines the protection of the aquatic life use as the protection of “waters in which naturally occurring water quality and habitat conditions allow the maintenance of a wide variety” of biota. 10 C.S.R. 20-7.031(1)(C)(1). The CWA defines the aquatic life use as “water quality which provides for the protection and propagation of fish, shellfish, and wildlife.” 33 U.S.C. § 1251(a)(2). The State’s standards were designed to protect the health of the fish at the top of the food chain—the “apex predators” or “sport fish”, who are also the top targets of recreational anglers. AR 4028. These fish generally thrive in environments with more nutrients. AR 4032.

According to the State, “findings show the health of sport fish populations can be interpreted as an indicator of overall ecosystem health and the presence of a ‘wide variety’ of aquatic biota, as defined in the existing regulation.” AR 3160. The State reasoned that because sport fish rely on the health of the entire ecosystem below them, a thriving sport fish population is a safe sign that a “wide variety” of biota in the lake is being maintained. AR 3178. It acknowledged the research on the positive correlation between sport- and non-sport fish population health was “somewhat controversial” but concluded that “aquatic organism biomass and diversity generally

increase with trophic state” up to a point, and that higher trophic levels<sup>12</sup> usually lead to a greater concentration of sport fish versus fish species lower on the food chain. AR 3177-78.

Not surprisingly, EPA did not pass on the method by which the State arrived at its proposed standards. Instead, it considered whether the proposed standards would protect the aquatic life use as that term is defined in 10 C.S.R. 20-7.031(1)(C)(1). EPA determined that “the selection of 30 µg/L for the Plains to be reasonable with respect to protecting a wide variety of biota and maintaining a healthy sport fish population as Missouri defines it.” *Id.*<sup>13</sup> EPA confirmed that the State was “most interested in maintaining a healthy sport fishery” but that the health of a sport fishery was an acceptable way to define the aquatic life use given the subjective nature of the term “wide variety” in 10 C.S.R. 20-7.031(1)(C)(1). AR 4033. According to EPA, the term “wide variety” gave the State leeway in designing criteria according to its own “preference and judgment.” There is no magic number that will maximally and equally protect all life in a lake—in this context, the State’s 30 µg/L chlorophyll criteria represents a decision to favor the interests of recreational anglers looking for the big catch over, say, the interests of smallmouth bass enthusiasts. The State’s choice to emphasize the protection of sport fish as opposed to other types of wildlife was within its discretion given EPA’s scientific conclusion that “as a general matter, as nutrient levels increase in a lake system, algal growth and fish biomass also increase, with increasing abundance of most, if not all, fish species” and that the State’s proposed standards would protect a wide variety of wildlife. *Id.*

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<sup>12</sup> “Higher trophic levels” simply means a more nutrient-rich environment.

<sup>13</sup> The Coalition focuses its argument on the nutrient criterion in the Plains ecoregion, where the State’s proposed standards would allow the highest level of eutrophication. EPA asserts, and the Coalition does not dispute, that the lower chlorophyll thresholds in the Ozark and Ozarks Highlands region are set at acceptable mesotrophic (mid-trophic) levels. AR 4041.

The Coalition argues that the State’s “apex predator” method of designing nutrient criteria was unsupported by the scientific literature. The scientific literature presents at best murky evidence of a correlation between the health of the sport fish population and the health of that lake’s entire biota. However, EPA did not rely on the State’s “apex predator” theory in its approval decision. Rather, it concluded that the framework established by the State, although designed to maintain a healthy sports fishery, would have the effect of protecting a “wide variety” of biota as required under Missouri law. AR 4034 (“the EPA considers the selection of 30 µg/L for the Plains to be reasonable with respect to protecting a wide variety of biota and maintaining a healthy sport fish population as Missouri defines it.”). Because EPA did not rely on the State’s sport fish methodology when determining that the nutrient criteria would protect the aquatic life use, the State’s adoption of this questionable methodology does not undermine EPA’s decision.

The Coalition next argues that EPA’s decision to go along with the State’s emphasis on protecting sport fish—in its words, a “sliver” of the aquatic life population—is at odds with the CWA, which defines the aquatic life use as protecting not just fish but also shellfish and other wildlife, 33 U.S.C. § 1251(a)(2), and Missouri’s own regulations, which require the protection of a “wide variety” of biota. 10 C.S.R. 20-7.031(1)(C)(1). The Coalition takes particular issue with the chlorophyll numeric criteria in the Plains ecoregion, set at 30 µg/L. AR 4029. It claims the numeric criteria were designed to protect only three or four species at the expense of all others and claims this approach is incompatible with the CWA’s statutory and regulatory framework. Pl. Br. at 32.

However, the sole issue before the Court is whether EPA’s decision to approve the proposed standards accords with the law and is supportable on any rational basis. *Nat’l Parks Conservation Ass’n*, 816 F.3d at 994. EPA’s decision to look past the wisdom of the State’s sport

fish-first approach in designing its criteria was not only defensible but required given the narrow scope of its review. See 33 U.S.C. §§ 1313(a)(3)(C), (c)(2); 40 C.F.R. § § 131.15(a), *et seq.* *City of Albuquerque v. Browner*, 97 F.3d 415, 425 (10th Cir. 1996) (“The Clean Water Act’s approach, therefore, is to place the primary responsibility on states to adopt and implement their own water quality standards provided only that they cannot be less stringent than the Act requires.”).

Here, EPA made a technical determination that the State’s proposed chlorophyll criteria in the Plains ecoregion would, in combination with the rest of the combined criteria framework, protect the aquatic life use by ensuring the health of a wide range of biota and thus complied with the CWA and Missouri law. EPA determined that while the State’s proposed standards were designed to protect the sport fish population, it did consider other types of wildlife when measuring a lake’s health. For instance, the “fish kill” screening factor is defined as the observed death of not just fish but other aquatic organisms, including mussels, crayfish, mayflies, aquatic worms, reptiles, and amphibians. AR 3182-83. Furthermore, EPA in its decision document cited to twelve studies establishing that increased levels of chlorophyll are associated with increased biomass of all fish, not just sport fish, and noted that while at some point increased nutrient levels would lead to decreased species diversity, “these levels appear to be quite high, higher than the levels Missouri has established” for their screening values or their numeric criteria. AR 4029 (citations to scientific literature omitted). Setting aside the merits of the State’s public policy choices and the validity of its apex predator theory, EPA had a colorable rational basis for concluding that its proposed standards would protect the aquatic life use as that term is defined in the CWA and Missouri law. As such, its approval decision was not arbitrary or capricious.

EPA’s decision was also supported by comparisons to nutrient criteria in other states. It pointed out that the State’s chlorophyll criteria in the Plains ecoregion was similar (in most cases

more stringent) to approved criteria for similar bodies of water in Minnesota, Virginia, Arizona, and both Carolinas, which had been found protective of the aquatic life use under 33 U.S.C. § 1251(a)(2).<sup>14</sup>

Given all these considerations, the Court finds EPA's decision was not arbitrary or capricious, was not an abuse of discretion, and accorded with the law. The Court cannot set it aside.

### **CONCLUSION**

For the reasons explained above, the Court finds the Coalition has not met its burden of demonstrating that the agency's decision to approve the State's water quality standards was arbitrary, capricious, an abuse of discretion, or not in accordance with law. See *Guaranty Sav. & Loan Ass'n v. Fed. Home Loan Bank Bd.*, 794 F.2d 1339, 1342 (8th Cir. 1986). Consequently, the Court cannot set the agency action aside. 5 U.S.C. § 706(2)(A); *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). The Coalition's Motion for Summary Judgment is denied. EPA and the State of Missouri's Motions for Summary Judgment are granted. The Coalition's claim is dismissed with prejudice. Each party shall bear their own costs and attorney's fees.

**IT IS SO ORDERED.**

s/ Nanette K. Laughrey  
NANETTE K. LAUGHREY  
United States District Judge

Dated: May 31, 2021  
Jefferson City, Missouri

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<sup>14</sup> The proposed chlorophyll threshold in the Plains Region is 30 µg/L, comparable to the chlorophyll threshold ranges in Arizona (30-50 µg/L), South Carolina (10-40 µg/L), North Carolina (15-40 µg/L), and Virginia (10-60 µg/L). AR 3162.